



# Market Overview

as of: 28 September 2015

- Copper:** Copper was briefly priced above-5,400 USD/t during last fortnight, but buyers lost their steam and red metal finished last week just over 5,000 USD/t level. One of the factors contributing to price gain was news on earthquake in Chile. As it turned out, although the magnitude was quite high, no major output has been hurt by the event (*page 2*).
- Precious metals:** The rate hike fears outweighed recently any benefit that gold price could have received from any other factor. Meanwhile, when key traders are about to be scrutinised, the physical market looks positive (*page 4*).
- Oil & Other commodities** Energy prices have continued to remain depressed, with Brent spot staying below 50 USD/bbl since July. Prolonged period of cheap products force drillers to limit their activity, translating into equipment manufacturers' sales – Caterpillar have just announced big jobs cuts to limit costs (*page 5*).
- USA:** Market participants expected the Fed to provide a welcome distraction from China-watching, only to find that the Fed has been China-watching too – FOMC once more decided not to raise rates due to worries about the slowdown in emerging markets (*page 6*).

**Earthquake in Chile bumped copper price up for a while but had no real effect on supply** (*more on [page 2](#)*)



 - earthquake epicentre  
 - big mines area






Source: Macquarie Research, KGHM

## Key market prices

|                        | Close price | 2w chng. |
|------------------------|-------------|----------|
| <b>LME (USD/t)</b>     |             |          |
| ▼ Copper               | 5 098.00    | -4.7%    |
| ▼ Nickel               | 9 820.00    | -3.6%    |
| <b>LBMA (USD/troz)</b> |             |          |
| ▲ Silver               | 14.99       | 2.8%     |
| ▲ Gold (PM)            | 1 146.65    | 4.2%     |
| <b>FX</b>              |             |          |
| ▼ EUR/USD              | 1.1151      | -1.0%    |
| ▲ EUR/PLN              | 4.2115      | 0.1%     |
| ▲ USD/PLN              | 3.7818      | 1.5%     |
| ▲ USD/CAD              | 1.3325      | 0.4%     |
| ▲ USD/CLP              | 705.92      | 2.2%     |
| <b>Stocks</b>          |             |          |
| ▼ KGHM                 | 81.15       | -4.4%    |

 Source: Bloomberg, KGHM; (*more on [page 9](#)*)

## Important macroeconomic data

| Release                                                                                                   | For |         |
|-----------------------------------------------------------------------------------------------------------|-----|---------|
|  GDP (annlzd., qoq)  | 2Q  | 3.9% ▲  |
|  Caixin's manuf. PMI | Sep | 47.0 ▼  |
|  Manufacturing PMI   | Sep | 52.0 ▼  |
|  Manufacturing PMI   | Sep | 50.4 ▲  |
|  Retail sales (yoy)  | Aug | -0.3% ▼ |

 Source: Bloomberg, KGHM; (*more on [page 7](#)*)

## Market Risk Unit

marketrisk@kgHM.com

Grzegorz Laskowski

Łukasz Bielak

Marek Krochta

Wojciech Demski

Lech Chłopecki

in cooperation with

David Stypula

## Base and precious metals | Other commodities

### Copper

Copper was briefly priced above 5,400 USD/t during last fortnight, but buyers lost their steam and red metal finished last week just over 5,000 USD/t level. One of the factors contributing to price gains was news on earthquake in Chile. As it turned out, although the magnitude was quite high, no major output has been hurt by the event.

#### Mines and ports mostly unaffected by earthquake in Chile

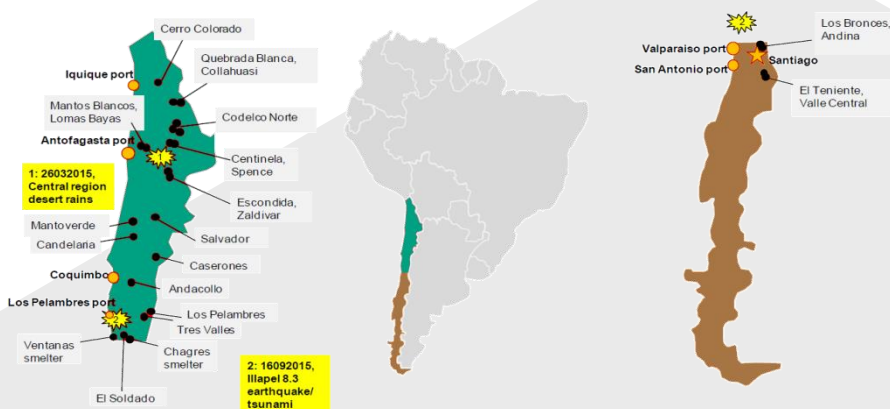
Earthquake had a high magnitude of 8.3

An 8.3-magnitude earthquake hit the coast of Chile west of the town of Illapel late on September, 16 (local time), triggering tremors and a subsequent influx of high waves along the coastline near the epicentre. The incident occurred around 280km north of Santiago but south of most of the country's largest copper mines.

The epicentre was far south of country's major copper projects

Codelco and Antofagasta briefly halted operations at Andina and Los Pelambres mines but the main disruptions appear to have been to coastal sites. The Coquimbo port has been affected, while Codelco halted operations and evacuated staff at its Ventanas smelter near the coast for a few hours until the tsunami warning was lifted. Los Pelambres' Los Vilos port facilities appeared to be close to the epicentre, but Antofagasta informed that the site was not damaged. Unlike March rains and flooding, the location of the incident is far south of Chile's major copper mining area, and its main potential consequences appear to be limited to Los Pelambres, Andacollo, Andina, the Ventanas and Chagres smelters and various port facilities along the coast.

#### Earthquake in Chile was too far south to affect most of the big copper mines



Source: Macquarie Research, KGHM

Disruptions due to events are estimated at only 5kt

While there are no specific information on damage to smaller mines in the area (Tres Valles, Las Cenizas etc), the overall impact seems small to none.

Any disruption due to temporary shutdowns is likely to be limited to no more than 5kt, an insignificant amount compared to 900kt of disruptions YTD, according to Macquarie Research. However, with Chile, a miner of one third of the world's copper being also one of the most prone to earthquakes countries, the potential for market disruption from these types of natural disasters remains generally elevated, and by definition unpredictable.

### Chile offers emergency loans to struggling miners

Chile's government will offer emergency loans to the nation's medium-sized copper mines, which are struggling to survive said Chilean Mining Minister Aurora Williams.

**Only over 20 companies with production of <50 kt/ year will be eligible for loans**

The credit, which will run from September to December, will apply to just over 20 companies with long-term contracts to supply mineral to state mining development company ENAMI. The loan will have the equivalent value of 10 US\$/lb of copper. Targeted miners are those producing less than 50 kt/year of the metal. The slide in copper prices this year to lows last seen in the aftermath of the 2008 financial crisis has put significant pressure on Chile's copper industry.

### Other important information on copper market:

- Glencore Plc, the worst performer in FTSE100, sold USD 2.5bn of new shares to pay down debt and help protect its credit rating. Senior managers including CEO Ivan Glasenberg, collectively representing 22 percent of shareholders, bought stocks too. The share sale is part of a wider USD 10bn debt-reduction program, which saw the company scrap dividends and plan asset sales to cut its USD 30bn borrowings. Moody's has recently cut its outlook to negative on Glencore and affirmed the company's Baa2 debt rating. The same move was made by Standard & Poor's a week earlier on BBB rating.
- Barrick Gold Corp will close its Salt Lake City office by the end of November and dissolve a standalone copper unit, to cut costs to help pare its debt. The office has approximately 110 employees, down from 130 earlier this year. Earlier this year, Barrick closed an office in Perth, Australia. The standalone copper unit will be integrated into the company.
- Southern Copper Corp commented that opposition to its Tia Maria project in southern Peru is easing thanks to a door-to-door campaign in communities where activists derailed the project with protests earlier this year. The company still hopes to get the USD 1.4bn project in the region of Arequipa back on track this year.
- Glencore's Zambian unit Mopani Copper Mines has notified the government that it plans to lay off more than 3,800 workers due to lower metal prices and high production costs.

## Precious metals

**The rate hike fears outweighed recently any benefit that gold price could have received from any other factor. Meanwhile, when key traders are about to be scrutinised, the physical market looks positive.**

### Fed rate decision most important factor for gold price

Gold dropped recently on expectations the Federal Reserve will raise U.S. interest rates before the year is over, countering demand for a haven amid a global markets slump. Prices are heading for a fifth quarterly decline. The Fed will probably increase interest rates later this year and tighten policy gradually thereafter, New York Fed President William C. Dudley said recently, echoing the sentiment of Chair Janet Yellen that an uncertain global outlook will not postpone liftoff into 2016.

### Banks undergoing another investigation on rigging prices

The Swiss Competition Commission (COMCO) has recently opened an investigation against two Swiss banks, UBS and Julius Baer. It is also looking at Deutsche Bank, HSBC, Barclays, Morgan Stanley and Mitsui, it said in a statement. The Commission informed it had indications that the banks had "possibly concluded illegal competition defying deals" in the trade of precious metals like gold, silver and platinum. COMCO in particular suspects "possible price fixing deals, especially in connection with spreads. Both Barclays and HSBC have already been fined in recent months for unrelated offences. Barclays was hit with a massive GBP 1.5bn fine in May for rigging foreign exchange rates, while HSBC was ordered to pay GBP 28mn in June over failures relating to alleged money laundering at its private Swiss bank.

### Positive news from physical market

Commerzbank looks for Chinese and Indian demand to support gold in the coming months. The German bank cites Swiss customs data showing that Switzerland exported 173.9 tons of gold in August, 8% more than in the previous month, with nearly 70% of this amount shipped to Asia. Whereas exports to India remained constant month-on-month, 50% more gold was sold to China.

Total U.S. Mint sales gold-bullion coins have already hit 110,000 ounces in September, topping the total from August that Barclays said it was a strong month. The sales of U.S. coins have continued the strong run since July.

## Oil & Other commodities

Energy prices have continued to remain depressed, with Brent spot staying below 50 USD/bbl since July. Prolonged period of cheap products force drillers to limit their activity, translating into equipment manufacturers' sales – Caterpillar have just announced big jobs cuts to limit costs.

### Caterpillar cuts jobs on energy prices plunge

On September, 24, Caterpillar Inc., the world's most valuable machinery producer, announced a plan to cut as many as 10,000 jobs, or 9% of its workforce, through 2018 as the effects of crude's collapse pass through the industry. The last time the company decided to significantly limit headcount, by 13,000, a mining slowdown was to blame but now the main culprit is oil, as slumping prices hurt drillers. The measures announced last week, including also second reduction in sales guidance in just two months, mark a capitulation to a prolonged downturn in energy – the segment that had helped shield Caterpillar's earnings as mining slumped and construction remained tepid.

Caterpillar plans to cut 9% of its workforce

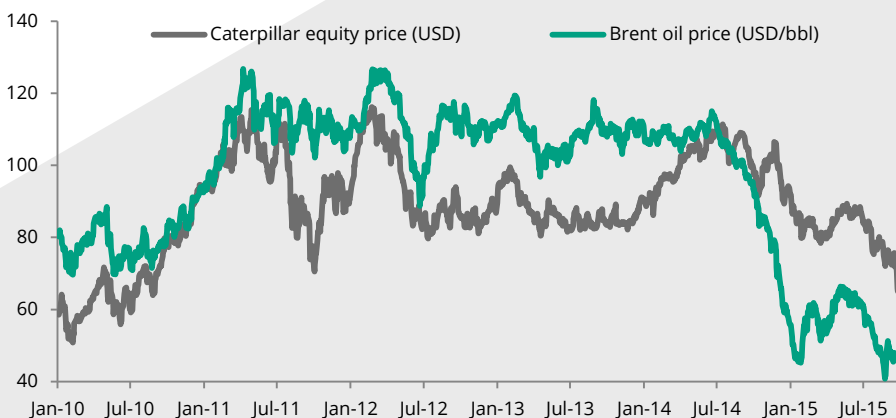
Company's shares lost nearly 30% YTD

On announcement day, company's stocks fell 6.3% to a five-year low. YTD Caterpillar lost more than 28% of its value, the biggest annual drop since 2008. The consolidation may affect about 20 plants, part of a plan that will save about USD 1.5bn of operating costs annually and cost about USD 2bn pre-tax. Headcount was 111,247 in the second quarter. Previous reduction of 13,000 jobs in 2013 marked a 5.5% reduction at the time, according to data compiled by Bloomberg.

The lowest since 2009 number of oil and gas rigs is one factors behind the cuts

Since 2011, a slowdown in China has created a glut of metals and coal, leaving Caterpillar's mining customers with shut down mines and lots full of idled equipment. Now, tumbling oil and gas prices are leading to a similar retreat by drillers – the number of active oil and natural-gas rigs around the world has averaged 2,472 through Aug. 31, the lowest since 2009.

### Low energy prices have put equipment manufacturing companies under additional pressure



Source: Bloomberg, KGHM

## Global economies | Foreign exchange markets

### USA: Fed delays hikes once more

Market participants expected the Fed to provide a welcome distraction from China-watching, only to find that the Fed has been China-watching too - FOMC once more decided not to raise rates due to worries about the slowdown in emerging markets.

#### Tightening no longer "data dependent"?

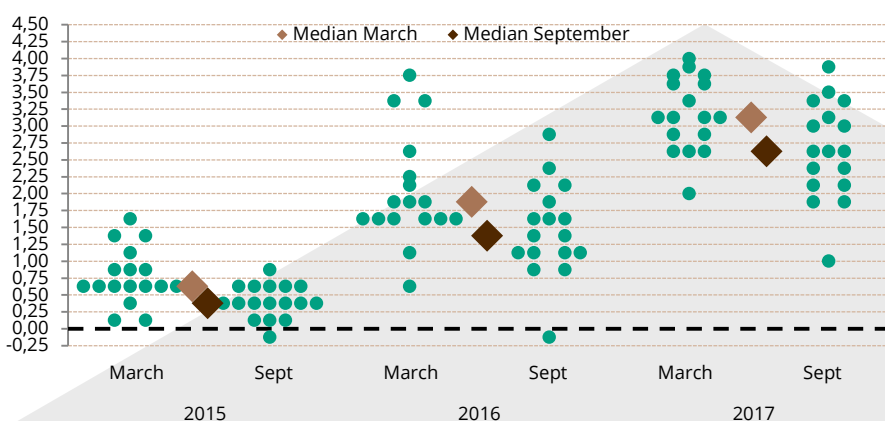
The decision not to change rates, despite a sound domestic backdrop, has forced some analysts to argue that the rules of the game have changed. Some commentators believe that the confirmation that external risks, in the form of the slowdown in emerging markets, drove the FOMC's decision means that investors must throw the "data dependency" rulebook away and start afresh.

The Fed faces a very asymmetric risk landscape. With few policy options on the downside, imported deflation would be very difficult to deal with. On the other hand, US monetary policy makers have an effective set tools to deal with any uptick in inflation, although no upward price pressure are expected to materialise any time soon.

#### The decision supports the "lower for longer" argument

According to Citi economists, the Fed would not have delayed tightening on the back of China risks if the Fed Funds rate was at 2.5%, but such low rates make FOMC hesitant to take the risks of tightening. Therefore, the latest decision may be read by the markets as the "lower for longer" argument in the US and the UK, and possibly raises the likelihood of further easing elsewhere.

#### FOMC's predictions are now significantly lower than in March, with one member even seeing negative rates until at least 2016-end










Source: Bloomberg, KGHM

## Macroeconomic calendar

### Important macroeconomic data releases

| Weight          | Date   | Event                                                | For | Reading <sup>1</sup> | Previous | Consensus <sup>2</sup> |  |
|-----------------|--------|------------------------------------------------------|-----|----------------------|----------|------------------------|--|
| <b>China</b>    |        |                                                      |     |                      |          |                        |  |
| ☆☆☆             | 23-Sep | Caixin's manufacturing PMI - preliminary data        | Sep | 47.0 ▼               | 47.3     | 47.5                   |  |
| <b>Poland</b>   |        |                                                      |     |                      |          |                        |  |
| ☆☆              | 14-Sep | Trade balance (EUR mn)                               | Jul | -1 071 ▼             | 56.0     | 107                    |  |
| ☆☆              | 14-Sep | Exports (EUR mn)                                     | Jul | 13 552 ▼             | 14 261   | 14 317                 |  |
| ☆☆              | 14-Sep | Current account balance (EUR mn)                     | Jul | -1 660 ▼             | - 849    | - 527                  |  |
| ☆               | 14-Sep | M3 money supply (yoy)                                | Aug | 7.3% ▼               | 8.6%     | 8.0%                   |  |
| ☆☆☆☆            | 15-Sep | Consumer inflation CPI (yoy)                         | Aug | -0.6% ▲              | -0.7%    | -0.7%                  |  |
| ☆               | 15-Sep | Budget balance (ytd)                                 | Aug | 56.1% ▼              | 57.7%    | --                     |  |
| ☆☆☆☆            | 16-Sep | Core CPI (excluding food and energy, yoy)            | Aug | 0.4% -               | 0.4%     | 0.4%                   |  |
| ☆☆              | 16-Sep | Average gross salary (yoy)                           | Aug | 3.4% ▲               | 3.3%     | 3.5%                   |  |
| ☆               | 16-Sep | Employment (yoy)                                     | Aug | 1.0% ▲               | 0.9%     | 0.9%                   |  |
| ☆☆☆☆            | 17-Sep | Sold industrial production (yoy)                     | Aug | 5.3% ▲               | 3.8%     | 6.4%                   |  |
| ☆☆☆             | 17-Sep | Retail sales (yoy)                                   | Aug | -0.3% ▼              | 1.2%     | 1.5%                   |  |
| ☆☆              | 17-Sep | Producer inflation PPI (yoy)‡                        | Aug | -2.7% ▼              | -1.8%    | -2.4%                  |  |
| ☆☆              | 23-Sep | Unemployment rate                                    | Aug | 10.0% ▼              | 10.1%    | 10.0%                  |  |
| <b>US</b>       |        |                                                      |     |                      |          |                        |  |
| ☆☆              | 15-Sep | Retail sales (excluding autos, mom)‡                 | Aug | 0.1% ▼               | 0.6%     | 0.2%                   |  |
| ☆☆☆☆            | 15-Sep | Industrial production (mom)‡                         | Aug | -0.4% ▼              | 0.9%     | -0.2%                  |  |
| ☆               | 15-Sep | Capacity utilization                                 | Aug | 77.6% ▼              | 78.0%    | 77.8%                  |  |
| ☆☆☆☆            | 16-Sep | Consumer inflation CPI (mom)                         | Aug | -0.1% ▼              | 0.1%     | -0.1%                  |  |
| ☆☆☆☆            | 16-Sep | Consumer inflation CPI (yoy)                         | Aug | 0.2% -               | 0.2%     | 0.2%                   |  |
| ☆☆              | 17-Sep | Philadelphia Fed business outlook                    | Sep | - 6.0 ▼              | 8.3      | 5.9                    |  |
| ☆☆☆☆☆           | 17-Sep | FOMC base rate decision - upper bound (Fed)          | Sep | 0.25% -              | 0.25%    | 0.25%                  |  |
| ☆☆☆☆☆           | 17-Sep | FOMC base rate decision - lower bound (Fed)          | Sep | 0.00% -              | 0.00%    | 0.00%                  |  |
| ☆               | 22-Sep | Richmond Fed manufacturing index                     | Sep | - 5.0 ▼              | 0.0      | 2.0                    |  |
| ☆☆☆             | 23-Sep | Manufacturing PMI - preliminary data                 | Sep | 53.0 -               | 53.0     | 52.8                   |  |
| ☆☆              | 24-Sep | Durable goods orders‡                                | Aug | -2.0% ▼              | 1.9%     | -2.3%                  |  |
| ☆☆☆☆☆           | 25-Sep | GDP (annualized, qoq) -                              | 2Q  | 3.9% ▲               | 3.7%     | 3.7%                   |  |
| ☆☆☆             | 25-Sep | Composite PMI - preliminary data                     | Sep | 55.3 ▼               | 55.7     | --                     |  |
| ☆☆☆             | 25-Sep | PMI services - preliminary data                      | Sep | 55.6 ▼               | 56.1     | 55.6                   |  |
| ☆☆              | 25-Sep | University of Michigan confidence index - final data | Sep | 87.2 ▲               | 85.7     | 86.5                   |  |
| <b>Eurozone</b> |        |                                                      |     |                      |          |                        |  |
| ☆☆☆☆            | 14-Sep | Industrial production (sa, mom)‡                     | Jul | 0.6% ▲               | -0.3%    | 0.3%                   |  |
| ☆☆☆☆            | 14-Sep | Industrial production (wda, yoy)‡                    | Jul | 1.9% ▲               | 1.5%     | 0.7%                   |  |
| ☆               | 15-Sep | Trade balance (EUR mn)                               | Jul | 31.4 ▲               | 26.4     | 28.0                   |  |
| ☆               | 15-Sep | ZEW survey expectations                              | Sep | 33.3 ▼               | 47.6     | --                     |  |
| ☆☆☆☆            | 16-Sep | Consumer inflation CPI (yoy) - final data            | Aug | 0.1% ▼               | 0.2%     | 0.2%                   |  |
| ☆☆☆☆            | 16-Sep | Core CPI (yoy) - final data                          | Aug | 0.9% ▼               | 1.0%     | 1.0%                   |  |
| ☆☆              | 16-Sep | Labour costs (yoy)‡                                  | 2Q  | 1.6% ▼               | 1.9%     | --                     |  |
| ☆               | 22-Sep | Consumer confidence - estimation                     | Sep | - 7.1 ▼              | - 6.9    | - 7.0                  |  |
| ☆☆☆             | 23-Sep | Composite PMI - preliminary data                     | Sep | 53.9 ▼               | 54.3     | 54.0                   |  |
| ☆☆☆             | 23-Sep | Manufacturing PMI - preliminary data                 | Sep | 52.0 ▼               | 52.3     | 52.0                   |  |
| ☆☆☆             | 23-Sep | Services PMI - preliminary data                      | Sep | 54.0 ▼               | 54.4     | 54.2                   |  |
| ☆               | 25-Sep | M3 money supply (yoy)                                | Aug | 4.8% ▼               | 5.3%     | 5.3%                   |  |

| Weight         | Date   | Event                                                  | For | Reading <sup>1</sup> | Previous | Consensus <sup>2</sup> |                                                                                       |
|----------------|--------|--------------------------------------------------------|-----|----------------------|----------|------------------------|---------------------------------------------------------------------------------------|
| <b>Germany</b> |        |                                                        |     |                      |          |                        |    |
| ☆☆☆            | 23-Sep | Composite PMI - preliminary data                       | Sep | 54.3 ▼               | 55.0     | 54.6                   | ☹                                                                                     |
| ☆☆☆            | 23-Sep | Manufacturing PMI - preliminary data                   | Sep | 52.5 ▼               | 53.3     | 52.6                   | ☹                                                                                     |
| ☆☆             | 24-Sep | GfK consumer confidence                                | Oct | 9.6 ▼                | 9.9      | 9.8                    | ☹                                                                                     |
| ☆☆             | 24-Sep | IFO business climate‡                                  | Sep | 109 ▲                | 108      | 108                    | ☺                                                                                     |
| <b>France</b>  |        |                                                        |     |                      |          |                        |    |
| ☆☆☆☆           | 15-Sep | Harmonized consumer inflation HICP (yoy)               | Aug | 0.1% ▼               | 0.2%     | 0.2%                   | ☹                                                                                     |
| ☆☆☆☆           | 15-Sep | Consumer inflation CPI (yoy)                           | Aug | 0.0% ▼               | 0.2%     | 0.1%                   | ☹                                                                                     |
| ☆☆☆☆☆          | 23-Sep | GDP (yoy) - final data                                 | 2Q  | 1.1% ▲               | 1.0%     | 1.0%                   | ☺                                                                                     |
| ☆☆☆☆☆          | 23-Sep | GDP (qoq) - final data                                 | 2Q  | 0.0% -               | 0.0%     | 0.0%                   | ⊖                                                                                     |
| ☆☆☆            | 23-Sep | Composite PMI - preliminary data                       | Sep | 51.4 ▲               | 50.2     | 50.4                   | ☺                                                                                     |
| ☆☆☆            | 23-Sep | Manufacturing PMI - preliminary data                   | Sep | 50.4 ▲               | 48.3     | 48.6                   | ☺                                                                                     |
| <b>Italy</b>   |        |                                                        |     |                      |          |                        |    |
| ☆☆☆☆           | 14-Sep | Harmonized consumer inflation HICP (yoy) - final data‡ | Aug | 0.4% -               | 0.4%     | 0.5%                   | ⊖                                                                                     |
| <b>UK</b>      |        |                                                        |     |                      |          |                        |    |
| ☆☆☆☆           | 15-Sep | Consumer inflation CPI (yoy)                           | Aug | 0.0% ▼               | 0.1%     | 0.0%                   | ⊖                                                                                     |
| ☆☆             | 16-Sep | Unemployment rate (ILO, 3-months)                      | Jul | 5.5% ▼               | 5.6%     | 5.6%                   | ☹                                                                                     |
| <b>Japan</b>   |        |                                                        |     |                      |          |                        |    |
| ☆☆☆☆           | 14-Sep | Industrial production (yoy) - final data               | Jul | 0.0% ▼               | 0.2%     | --                     | ☹                                                                                     |
| ☆☆☆            | 24-Sep | Manufacturing PMI - preliminary data                   | Sep | 50.9 ▼               | 51.7     | 51.2                   | ☹                                                                                     |
| ☆☆☆☆           | 25-Sep | Consumer inflation CPI (yoy)                           | Aug | 0.2% -               | 0.2%     | 0.1%                   | ☺                                                                                     |
| <b>Chile</b>   |        |                                                        |     |                      |          |                        |    |
| ☆☆☆☆☆          | 15-Sep | BCCh overnight rate target                             | Sep | 3.00% -              | 3.00%    | 3.00%                  | ⊖                                                                                     |
| <b>Canada</b>  |        |                                                        |     |                      |          |                        |  |
| ☆☆☆☆           | 18-Sep | Consumer inflation CPI (yoy)                           | Aug | 1.3% -               | 1.3%     | 1.3%                   | ⊖                                                                                     |

<sup>1</sup> Reading difference to previous release: ▲ = higher than previous; ▼ = lower than previous; = = equal to previous.

<sup>2</sup> Reading difference to consensus: ▲ = higher than consensus; ☹ = lower than consensus; ⊖ = equal to consensus.

mom = month-on-month; yoy = year-on-year; qoq = quarter on quarter; ytd year-to-date; sa = seasonally adjusted; wda = working days adjusted; ‡ = previous data after revision.

Source: Bloomberg, KGHM



## Key market data

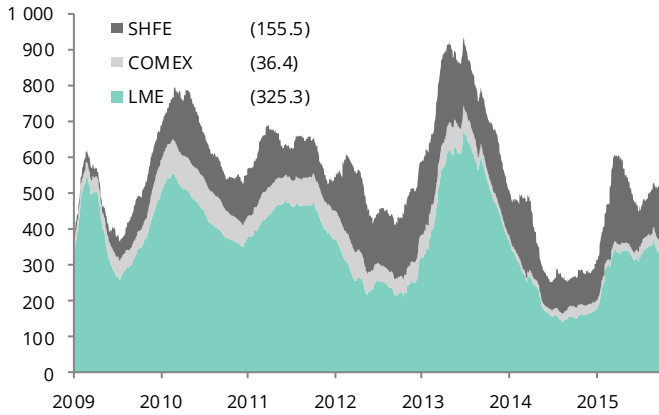
### Key base & precious metal prices, exchange rates and other important market factors

(as of: 25-Sep-15)

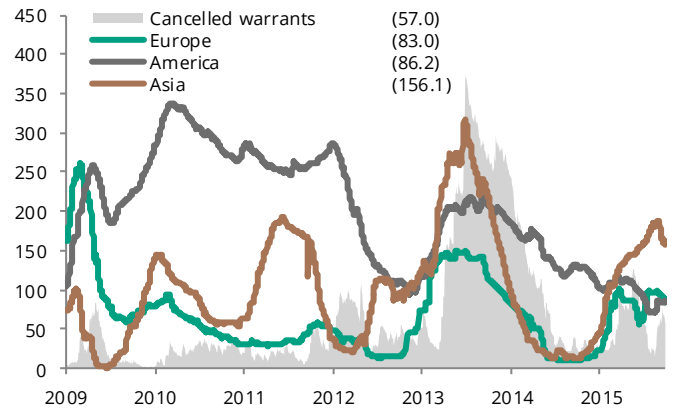
|                           | Price     | Price change ° |          |          |           | From year beginning ² |           |           |
|---------------------------|-----------|----------------|----------|----------|-----------|-----------------------|-----------|-----------|
|                           |           | 2W             | QTD      | YTD      | 1Y        | Average               | Min       | Max       |
| <b>LME (USD/t)</b>        |           |                |          |          |           |                       |           |           |
| Copper                    | 5 098.00  | ▼ -4.7%        | ▼ -10.9% | ▼ -19.8% | ▼ -24.7%  | 5 709.47              | 4 888.00  | 6 448.00  |
| Molybdenum                | 12 200.00 | ▼ -8.3%        | ▼ -11.3% | ▼ -41.9% | ▼ -51.2%  | 16 176.61             | 9 250.00  | 21 500.00 |
| Nickel                    | 9 820.00  | ▼ -3.6%        | ▼ -15.9% | ▼ -34.2% | ▼ -42.9%  | 12 653.04             | 9 305.00  | 15 455.00 |
| Aluminum                  | 1 566.50  | ▼ -3.0%        | ▼ -4.9%  | ▼ -14.5% | ▼ -18.7%  | 1 719.57              | 1 485.50  | 1 919.00  |
| Tin                       | 15 325.00 | ▼ -3.3%        | ▲ 9.6%   | ▼ -21.4% | ▼ -26.0%  | 16 408.52             | 13 895.00 | 19 750.00 |
| Zinc                      | 1 645.50  | ▼ -8.0%        | ▼ -17.5% | ▼ -24.1% | ▼ -27.3%  | 2 041.81              | 1 619.50  | 2 405.00  |
| Lead                      | 1 681.00  | ▼ -1.2%        | ▼ -4.2%  | ▼ -9.3%  | ▼ -18.9%  | 1 821.02              | 1 628.00  | 2 140.00  |
| <b>LBMA (USD/troz)</b>    |           |                |          |          |           |                       |           |           |
| Silver                    | 14.99     | ▲ 2.8%         | ▼ -4.5%  | ▼ -6.1%  | ▼ -14.4%  | 16.01                 | 14.27     | 18.23     |
| Gold ¹                    | 1 146.65  | ▲ 4.2%         | ▼ -2.1%  | ▼ -4.4%  | ▼ -5.5%   | 1 178.49              | 1 080.80  | 1 295.75  |
| <b>LPPM (USD/troz)</b>    |           |                |          |          |           |                       |           |           |
| Platinum ¹                | 945.00    | ▼ -2.7%        | ▼ -12.3% | ▼ -21.9% | ▼ -27.9%  | 1 103.13              | 935.00    | 1 285.00  |
| Palladium ¹               | 672.00    | ▲ 14.5%        | ▼ -0.7%  | ▼ -15.8% | ▼ -16.7%  | 719.76                | 524.00    | 831.00    |
| <b>FX ³</b>               |           |                |          |          |           |                       |           |           |
| EUR/USD                   | 1.1151    | ▼ -1.0%        | ▼ -0.3%  | ▼ -8.2%  | ▼ -12.3%  | 1.1143                | 1.0552    | 1.2043    |
| EUR/PLN                   | 4.2115    | ▲ 0.1%         | ▲ 0.4%   | ▼ -1.2%  | ▲ 0.9%    | 4.1563                | 3.9822    | 4.3335    |
| USD/PLN                   | 0.0000    | ▼ 100.0%       | ▼ 100.0% | ▼ 100.0% | ▼ -100.0% | 3.7317                | 3.5550    | 3.9260    |
| USD/CAD                   | 1.3325    | ▲ 0.4%         | ▲ 6.8%   | ▲ 14.9%  | ▲ 20.0%   | 1.2587                | 1.1728    | 1.3351    |
| USD/CNY                   | 6.3745    | ▼ 0.0%         | ▲ 2.8%   | ▲ 2.7%   | ▲ 3.9%    | 6.2474                | 6.1883    | 6.4128    |
| USD/CLP                   | 705.92    | ▲ 2.2%         | ▲ 11.2%  | ▲ 16.2%  | ▲ 17.9%   | 638.64                | 597.10    | 706.24    |
| <b>Money market</b>       |           |                |          |          |           |                       |           |           |
| 3m LIBOR USD              | 0.326     | ▼ -0.03        | ▲ 0.15   | ▲ 0.28   | ▲ 0.40    | 0.284                 | 0.251     | 0.345     |
| 3m EURIBOR                | -0.041    | ▲ 0.08         | ▲ 1.93   | ▼ -1.53  | ▼ -1.50   | 0.004                 | -0.041    | 0.076     |
| 3m WIBOR                  | 1.720     | - 0.00         | - 0.00   | ▼ -0.17  | ▼ -0.26   | 1.753                 | 1.650     | 2.060     |
| 5y USD interest rate swap | 1.493     | ▼ -0.05        | ▼ -0.16  | ▼ -0.16  | ▼ -0.22   | 1.644                 | 1.313     | 1.909     |
| 5y EUR interest rate swap | 0.371     | ▲ 0.01         | ▼ -0.26  | ▲ 0.03   | ▼ -0.21   | 0.365                 | 0.176     | 0.590     |
| 5y PLN interest rate swap | 2.010     | ▼ -0.06        | ▼ -0.20  | ▲ 0.03   | ▼ -0.10   | 2.075                 | 1.563     | 2.643     |
| <b>Fuel</b>               |           |                |          |          |           |                       |           |           |
| WTI Cushing               | 45.70     | ▲ 2.4%         | ▼ -23.2% | ▼ -14.2% | ▼ -51.6%  | 51.04                 | 38.09     | 61.43     |
| Brent                     | 46.67     | ▼ -1.6%        | ▼ -23.9% | ▼ -16.3% | ▼ -51.0%  | 55.50                 | 40.74     | 66.37     |
| Diesel NY (ULSD)          | 149.75    | ▼ -1.6%        | ▼ -20.3% | ▼ -17.9% | ▼ -44.4%  | 176.93                | 135.84    | 233.64    |
| <b>Others</b>             |           |                |          |          |           |                       |           |           |
| VIX                       | 23.62     | ▲ 0.02         | ▲ 0.30   | ▲ 0.23   | ▲ 0.51    | 16.39                 | 11.95     | 40.74     |
| BBG Commodity Index       | 88.49     | ▼ -0.5%        | ▼ -13.8% | ▼ -15.2% | ▼ -25.7%  | 98.34                 | 85.14     | 105.49    |
| S&P500                    | 1 931.34  | ▼ -1.5%        | ▼ -6.4%  | ▼ -6.2%  | ▼ -1.8%   | 2 066.78              | 1 867.61  | 2 130.82  |
| DAX                       | 9 688.53  | ▼ -4.3%        | ▼ -11.5% | ▼ -1.2%  | ▲ 1.9%    | 11 099.48             | 9 427.64  | 12 374.73 |
| Shanghai Composite        | 3 092.35  | ▼ -3.4%        | ▼ -27.7% | ▼ -4.4%  | ▲ 31.9%   | 3 809.45              | 2 927.29  | 5 166.35  |
| WIG 20                    | 2 091.73  | ▼ -4.3%        | ▼ -9.8%  | ▼ -9.7%  | ▼ -15.3%  | 2 323.74              | 2 056.38  | 2 549.40  |
| KGHM                      | 81.15     | ▼ -4.4%        | ▼ -23.8% | ▼ -25.4% | ▼ -34.9%  | 107.42                | 71.31     | 131.00    |

° change over: 2W = two weeks; QTD = quarter-to-day; YTD = year-to-date; 1Y = one year. ¹ based on daily closing prices. ² latest quoted price. ³ central banks' fixing rates (Bank of China HK for USD/CNY). ⁴

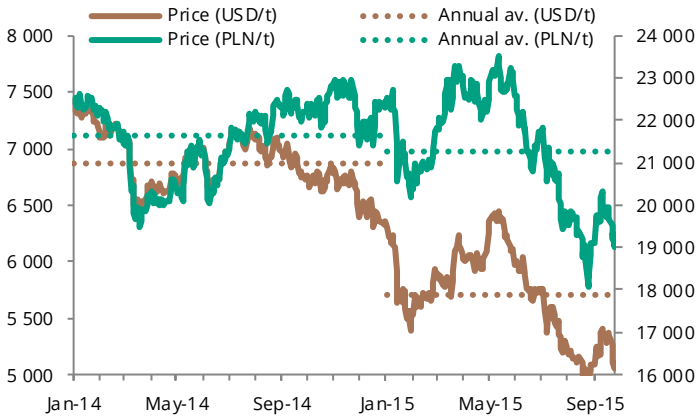
Source: Bloomberg, KGHM

**Copper: official exchange stocks (thousand tonnes)**


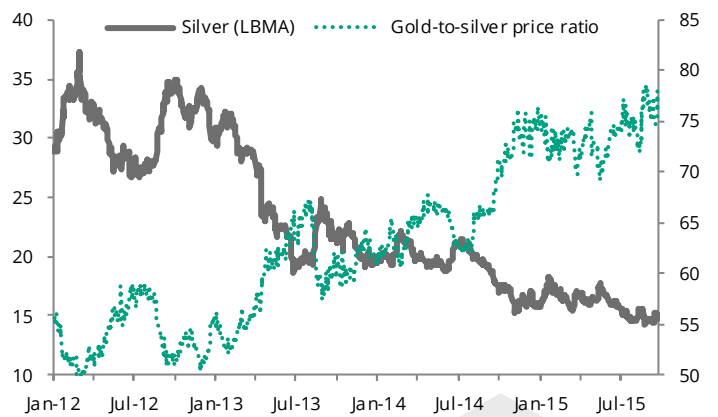
Note: Latest values in brackets. Source: Bloomberg, KGHM

**Copper: official LME stocks (thousand tonnes)**


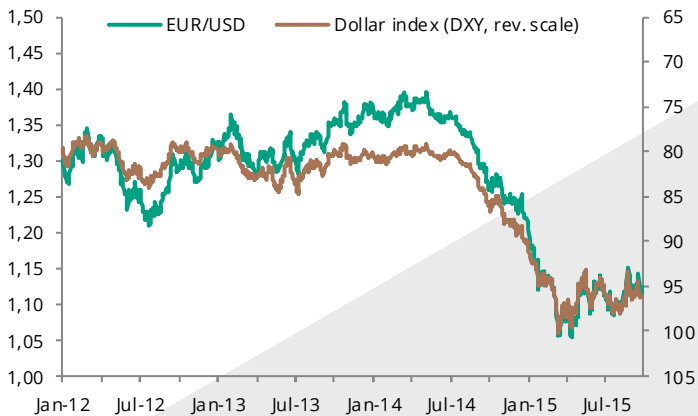
Note: Latest values in brackets. Source: Bloomberg, KGHM

**Copper: price in USD (lhs) and PLN (rhs) per tonne**


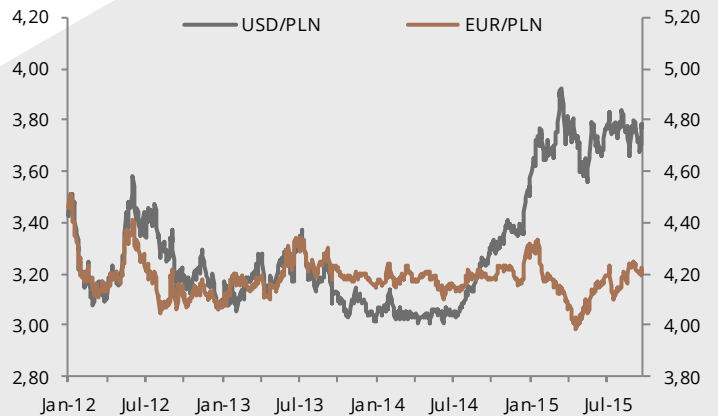
Source: Bloomberg, KGHM

**Silver: price (lhs) and gold ratio (rhs)**


Source: Bloomberg, KGHM

**USD: dollar index (lhs) and ECB-based EUR/USD (rhs)**


Source: Bloomberg, KGHM

**PLN: NBP-fixing based rate vs. USD (lhs) and EUR (rhs)**


Source: Bloomberg, KGHM

## Legal note

This document has been prepared based on the below listed reports, among others, published in the following period:  
**14 September – 27 September 2015.**

- “Commodities Comment” Macquarie Research Metals and Mining, ▪ “Commodities Daily” Standard Bank, ▪ “Commodities Weekly” Barclays Capital Research, ▪ “Metals Market Update” Morgan Stanley, ▪ “Daily Copper Wrap” Mitsui, ▪ “Base and Precious Metals Daily” JPMorgan, ▪ „Codziennik” BZ WBK, ▪ „Tygodnik Ekonomiczny” BZ WBK, ▪ „Raport dzienny” mBank, ▪ „Biuletyn Dzienny” Bank PEKAO S.A., ▪ „Dragonomics: China Research” Gavekal

Moreover, additional information published here was acquired in direct conversations with market dealers, from financial institution reports and from the following websites: ▪ lme.co.uk, ▪ lbma.org.uk, ▪ economy.com/dismal, ▪ thebulliondesk.com, ▪ lbma.org.uk/stats, ▪ crumonitor.com, ▪ metalbulletin.com, ▪ nbportal.pl, ▪ nbp.pl, as well as data providing systems: Thomson Reuters and Bloomberg.

Official metals prices are available on following websites:

- base metals: [www.lme.com/dataprices\\_products.asp](http://www.lme.com/dataprices_products.asp) (charge-free logging)
- silver and gold: [www.lbma.org.uk/pricing-and-statistics](http://www.lbma.org.uk/pricing-and-statistics)
- platinum and palladium: [www.lppm.com/statistics.aspx](http://www.lppm.com/statistics.aspx)

### **DISCLAIMER**

This document reflects the market view of the staff of KGHM Polska Miedz (Polish Copper)'s Market Risk Unit employees on the economy, commodity as well as financial markets. Although, according to the our best of our knowledge, all the facts presented in this publication come from or are based on reliable sources, we do not guarantee their correctness. Moreover, they may be incomplete or shortened. All the opinions and forecasts are backed by diligently-performed analyses valid as of the publishing date and may be subject to change. KGHM Polska Miedz (Polish Copper) S.A. is not obligated to announce any subsequent change of these opinions or forecasts. This document's purpose is solely informative and must not be interpreted as an offer or advice with regards to the purchase/sale of any mentioned financial instrument, nor it is part of such offer or advice.

Re-printing or using this publication or itsin whole or part requires prior written consent from KGHM. To acquire that such consent please contact the Communications and CSR Department of Communication (Departament Komunikacji I CSR) of and CSR KGHM Polska Miedz SA.

In case of questions or comments please contact us:

KGHM Polska Miedz (Polish Copper) S.A.

Departament Zarządzania Ryzykiem Rynkowym i Kredytowym (Market and Credit Risk Management Department)

Wydział Ryzyka Rynkowego (Market Risk Unit)

ul. M. Skłodowskiej-Curie 48

59-301 Lubin, Poland